

**PATENT**

App. Ser. No.: 10/829,613  
Atty. Dkt. No. ROC920040124 US1  
PS Ref. No.: IBMK40124

**REMARKS**

This is intended as a full and complete response to the Office Action dated November 1, 2006, having a shortened statutory period for response set to expire on February 1, 2007. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-42 are pending in the application. Claims 6-11, 13-19, 25-30, 32-38, and 40-42 remain pending following entry of this response. Claims 6, 7, 11, 13-17, 25-30, 32-44, 34, 34, 38, 40-42 have been amended. Claims 1-5, 12, 20-24, 31, and 39 have been cancelled. Applicants submit that the amendments do not introduce new matter.

Claim Rejections - 35 U.S.C. § 112

Claims rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 6, 7, 25, and 40:

The Examiner states:

In claim 6, 25, 40, it is unclear what is meant by "determining whether the query requires relating a first column and a second column having associated units metadata ... What is the query? How is the "associated units metadata" related? , what is "converting data contained in the first column ... ," The steps of "determining whether the query requires", "determining, from the associated units metadata" ... "converting data ... " are indefinite as they lack concrete active limitations as to how the steps are to be accomplished. One of skill in the art would not be able to determine what exactly must be done to accomplish the goal of the preamble. It is unclear how the "determining, from the associated units metadata ... "converting data ... " related to database tables.

*Office Action*, p. 3. Applicants believe that the amendments submitted with this response address any inadvertent indefiniteness present in the original claims. Similarly, applicants have amended claim 7 to clarify the limitations recited by this claim. Accordingly, Applicants request that this rejection of these claims be withdrawn.

Regarding claims 8-12 and 26-31:

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These claims are rejected as being dependent from one of claims 6, 7, or 25. Because Applicants believe that the amendments address the rejection of the base claims, Applicants believe that the rejection of these dependent claims is obviated without the need for further comment from Applicants.

Regarding Claims 13 and 32:

The Examiner states:

In claim 13, 32, it is unclear what is meant by "determining whether the query includes a result field ... ", "determining whether a column in the database table corresponding to the result field ... ", if so, converting data ... " What is the query? How is the converting data" related to first measurement unit and second measurement unit? The recited steps in claim 13,32 are indefinite as they lack concrete active limitations as to how the steps are to be accomplished. One of skill in the art would not be able to determine what exactly must be done to accomplish the goal of the preamble

*Office Action*, p. 4-5. Applicants believe that the amendments submitted with this response address any inadvertent indefiniteness present in the original claims. Accordingly, Applicants request that this rejection of these claims be withdrawn.

Regarding claims 14 and 33:

These claims are rejected as being dependent from one of claims 13 or 32. Because Applicants believe that the amendments address the rejection of the base claims, Applicants believe that the rejection of these dependent claims is obviated without the need for further comment from Applicants.

Regarding claims 15 and 34:

The Examiner states:

In claim 15, 34, it is unclear what is meant by "determining whether the query includes a result field ..... ", "determining whether a column in the database table ..... ", if so, modifying the result field having the first measurement unit.. ... , "executing the query .... " What is the query? How is "modifying the result field" related to first measurement and second measurement unit...? The recited steps in claim 15,34 are indefinite as they lack concrete active limitations as to how the steps are to be accomplished. One of skill in the art would not be able to determine what exactly must be done to accomplish the goal of the preamble

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*Office Action*, p. 5. Applicants believe that the amendments submitted with this response address any inadvertent indefiniteness present in the original claims. Accordingly, Applicants request that this rejection of these claims be withdrawn.

Regarding claims 16-19, 35-38:

These claims are rejected as being dependent from one of claims 15 or 34. Because Applicants believe that the amendments address the rejection of the base claims, Applicants believe that the rejection of these dependent claims is obviated without the need for further comment from Applicants.

Claim Rejections - 35 U.S.C. § 101

Claims 1-42 stand rejected under 35 U.S.C. § 101 because the invention is directed to non-statutory subject matter.

Applicants respectfully traverse this rejection. Specifically, Applicants submit that, as amended, claims 1-42 are directed to subject matter which produces a "useful, concrete, and tangible result," as required by 35 U.S.C. § 101.

For example, claims 6, 25, and 40, each recite a limitation of "receiving a query to be executed against the one or more database tables," and, ultimately, "executing the query against the converted data values in the first column and the data values in the second column." These claims also recite a limitation of converting the data values in first column to an equivalent data value when measured using a second measurement unit.

Further, the Examiner's focus on the "final result" as being the last limitation recited by these claims misconstrues the requirement that a claim produce a "useful, concrete, and tangible result." Instead of the last element (or any particular element), the proper focus is on the claim as a whole. See MPEP § 2601 The Examiner also states:

The examiner reviewed the specification page 14-16, 18-23, page 26, 0090-0092, page 27, but was unable to find a practical real-world use of the result (determining, from the associated units metadata, a first

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measurement unit for the first column and a second measurement unit for the second column; and converting data contained in the first column having the first measurement unit into equivalent data having the second measurement unit).

*Office Action*, p. 11. In response, Applicants respectfully point the Examiner to the method 1200 illustrated in Figure 12 and to the Example discussed in paragraphs 107-111. In this example, a SQL query that includes a reference to a first and second database columns, where data in the first column stores patient weight values in pounds (i.e., a "first measurement unit") and the second column stores data in kilograms (i.e., a "second measurement unit"). Before the query is executed, data from the first column may be converted into equivalent values of the measurement unit of the second column. Thus, Applicants submit that these claims clearly provide a "useful, concrete, and tangible" result.

Similarly, claims 13, 32, and 41 recite limitations of receiving a query to be executed against the one or more database tables, and among others, converting data values obtained as a query result with data values measured using the second measurement unit into equivalent data values measured using the first measurement unit. Applicants submit that this converting of what would be otherwise incompatible data values into equivalent data values clearly provides a useful concrete and tangible result. Again using the method shown in Application, Figure 12 and the Example discussed in paragraphs 107-111 of the Application, the conversion allows a query to specify a data request for a result field be provided using a first measurement unit (e.g., a request to return patient weights in pounds), where the data base column stores these values in a "second measurement units (e.g., kilograms).

Regarding claims 15, 34, and 42, Applicants submit that, as amended, these claims are directed to subject matter which produces a "useful, concrete, and tangible result," as required by 35 U.S.C. § 101.

Regarding these claims, the Examiner suggests:

In Claim 15, 34, 42, have the result of producing results related to "generating units metadata describing the measurement unit; and associating the units metadata with the column of the database table" however the claim[s] do not specify [a]: satisfying proper condition[s]; [b]

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that the result neither stored nor output is displayed to a user or otherwise used in the real world.

*Office Action*, p. 14. Again, Applicants suggest that the focus on only the last limitation of these claims, instead of the limitations of these claims as a whole, is misplaced.

Further, the Examiner states:

The examiner reviewed the specification page 14-16, 18-23, page 26, 0090-0092, page 27-29, but was unable to find a practical real-world use of the result (determining whether a column in the database table corresponding to the result field has an associated index using a second measurement unit; if so, modifying the result field having the first measurement unit into a result field having the second measurement unit of the associated index; and executing the query using the modified, associated index).

*Office Action*, p. 14. In response, Applicants respectfully point the Examiner to the method 1300 illustrated in Figure 13 and to the Example discussed in paragraphs 112 - 115. In particular, paragraph 114 discusses the method 1400 being used to process the query shown in Application, Table III. Specifically, the query includes a condition of "where patient\_bodyheight<5ft" (i.e., the condition specifies a value using a first measurement unit). As discussed in the application, however, the index value for a column might indicate that data for patient body height stored using a "second measurement unit" (e.g., meters). The claim recites a step addressing this type of situation; specifically, a step of "modifying the result field having the first measurement unit into a result field having the second measurement unit of the index and executing the query using the modified index." Applicants submit that, as a whole, this example clearly illustrates a "useful, concrete, and tangible result" of these claims. Namely, without the method recited by these claims, the query shown in Application, Table III could not be executed at all, or perhaps even worse, would return erroneous data values (e.g., patents with a body height of less than 5 meters).

Additionally, claims 25-38 have been amended to be limited to a computer-readable storage media. Applicants submit that these amendments address the 35 U.S.C. § 101 rejection set forth on pages 16 and 17 of the rejection, and respectfully request, therefore, that this rejection be withdrawn.

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Regarding, claims 7-12, 14, 16-19, 26-31, 33, 35-38, each of these claims depends from one of claims 6, 13, 15, 25, 32, or 34. Because Applicants believe that the above remarks clearly demonstrate that, as amended, the independent claims disclose subject matter squarely directed to a "useful, concrete, and tangible result," further discussion of these dependent claims is unnecessary.

Accordingly, for all the foregoing reasons, Applicants request that the rejections under 35 U.S.C. § 101 be withdrawn.

Claim Rejections - 35 U.S.C. § 102

Claims 1-42 stand rejected under 35 U.S.C. § 102(a) as being anticipated by *Cazemier et al.* (hereinafter "*Cazemier*"), US Patent No. 6609123 published on August 19, 2003. Applicants respectfully traverse this rejection.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Regarding Claims 6-13, 25-30, and 40:

In this case, *Cazemier* does not disclose "each and every element as set forth in the claim." For example, *Cazemier* does not disclose a method for managing execution of a query against data in one or more database tables that includes a step of determining, from the associated units metadata, a first measurement unit for the first column and a second measurement unit for the second column, wherein the first measurement unit specifies a unit of measure for data values in the first column and the second measurement unit specifies a unit of measure for data values in the second column.

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More generally, *Cazemier* does not disclose measurement units. Nevertheless, on this point, the Examiner suggests:

[*Cazemier* discloses] determining, from the associated units metadata [col. 12, line 42-47, col. 13, line 48-51], a first measurement unit for the first column and a second measurement unit for the second column [col 14, line 7-10, col 47, line 1-12, col 48, line 9-16], *Cazemier* specifically teaches metadata repository that generate the query related information, further query related information often referred to as a measure data for example as detailed in col 48, line 9-16]; converting data contained in the first column having the first measurement unit into equivalent data having the second measurement unit' [col 50, line 30-33, line 4252].

*Office Action*, p. 20. However, these passages do not disclose a first measurement unit that specifies a first unit of measure for data values in a first column a second measurement unit that specifies a second unit of measure for data values in a second column, as recited by claims 6, 25, and 40.

For example, the passages cited by Examiner regarding the first measurement unit and the second measurement unit are set forth below:

In all cases, one set of columns is a subset of the other column set as defined by the indexes of the tables. That is, one set of column names is wholly contained within the other set.

*Cazemier*, 14:7-10.

The query specifications 1004 function as an input interface for the query engine main components 1020. Each query specification 1004 defines data and organization of the data to be returned as a report to its corresponding client application 1002 (FIG. 44). The data matrix 1012 functions as an output interface for the query engine main components 1020. It is viewed as a storage of the retrieved data and methods for the retrieved data. Multiple implementations of the data matrix may exist, all providing the same interface. Some implementations may store the actual data values that are obtained, other implementations may provide a virtual storage mechanism and only obtain those values that are currently requested. A third form may be implemented that is a hybrid of the previous two.

*Cazemier*, 47:1-12.

A data area 1037 associated with a query specification 1004 is often referred to as a measure data area. A measure data area 1037 may contain one or more query items 1038 and sort items 1039. The measure data area 1037 must not contain any keys 1035. The measure

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data area 1037 of a query specification 1004 can explicitly be associated with at most one level from each edge 1031 defined in the query specification 1004.

*Cazemier*, 48:9-16. Clearly, none of these passages recite a method step of determining, from associated units metadata, a first measurement unit for the first column and a second measurement unit for the second column, wherein the first measurement unit specifies a first unit of measure for data values in the first column and the second measurement unit specifies a second unit of measure for data values in the second column, as recited by claims 6, 25, and 40.

Instead, the first passage discloses a database structure where "one set of columns is a subset of the other column." The second passage describes aspects of a query specification. As disclosed in *Cazemier*:

A query specification is a compound object modelled in the reporting system 4. It allows queries to be defined in reporting system 4 and to be referenced in other queries. Defined queries may be similar, but not equal to the Impromptu dataset.

*Cazemier*, 46:63-67. Third passage describes a data area associated with a data area, which is referred to as "measure data area" that "contains one or more query items. The "measure data" discussed in *Cazemier*, however, does not disclose a first measurement unit that specifies a first unit of measure for data values in a first column a second measurement unit that specifies a second unit of measure for data values in a second column, as recited by claims 6, 25, and 40; rather, as used in *Cazemier*, "measure data" a "data area 1037 associated with a query specification 1004." *Cazemier*, 48:9-10.

Accordingly, Applicants submit that claims 6, 25, 40, and the claims dependent therefrom are allowable, and respectfully request allowance of same.

Regarding claims 13-14, 15-19, 32-33 34-38 41, 42:

Independent claims 13, 15, 32, 34, 41, and 42 each recite a limitation similar to the limitation recited by claim 6 of determining, from the associated units metadata, a first measurement unit for the first column and a second measurement unit for the second column, wherein the first measurement unit specifies a first unit of measure for



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data values in the first column and the second measurement unit specifies a second unit of measure for data values in the second column.

Specifically, claims 13, 32, and 41 recite a limitation of determining whether a query includes a result field associated with a first measurement unit, wherein the first measurement unit specifies a first unit of measure for the result field included the query, and determining whether a column in the database table corresponding to the result field has units metadata indicating a second measurement unit, wherein the second measurement unit specifies a second unit of measure for data values stored in the column.

Similarly, claims 15, 34, and 42, recite a step of determining whether the query includes a result field associated with a first measurement unit, wherein the first measurement unit specifies a first unit of measure for the result field included the query and determining whether a column in the database table corresponding to the result field has an index specifying data values are stored in the column according to a second measurement unit, wherein the second measurement unit specifies a second unit of measure.

Applicants submit, for all the reasons discussed above regarding claims 6, 25, and 40, that *Cazemier* does not disclose at least these limitations recited by these claims.

Therefore, claims 13-14, 15-19, 32-33 34-38 41, 42 are believed to be allowable, and allowance of these claims is respectfully requested.

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Conclusion

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted, and  
**S-signed pursuant to 37 CFR 1.4,**

/Gero G. McClellan, Reg. No. 44,227/

Gero G. McClellan  
Registration No. 44,227  
PATTERSON & SHERIDAN, L.L.P.  
3040 Post Oak Blvd. Suite 1500  
Houston, TX 77056  
Telephone: (713) 623-4844  
Facsimile: (713) 623-4846  
Attorney for Applicant(s)